DOCUMENT RESUME

ED 337 331 RC 018 239

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TITLE The Phi Delta Kappa At-Risk Scale: Its Composition, Meaning and Educational Implications.
PUB DATE Mar 90
NOTE 12p.; Paper presented at the Rural Education Symposium of the American Council on Rural Special Education and the National Rural and Small Schools Consortium (Tucson, AZ, March 18-22, 1990).
PUB TYPE Speeches/Conference Papers (150)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Educational Practices; Elementary Secondary Education; Family Influence; *High Risk Students; *Measurement; Rural Schools; *Screening Tests; *Student Characteristics
IDENTIFIERS Phi Delta Kappa

ABSTRACT

As part of a larger study by Phi Delta Kappa International (PDK), the PDK chapter in southeastern Kansas examined at-risk factors and "school effort" to address such factors in its geographical area. Data were obtained from the files of 270 "typical" students in Grades 4, 7, and 10 of three rural schools and from interviews with teachers, counselors, and administrators. The 45-item PDK scale developed in 1989 and two modified scales were used to analyze the data. School effort score was based on the availability of 13 instructional strategies and services. Compared to the original PDK scale, the two modified scales placed more students in the upper 25th and upper 10th percentiles; most of this difference was in the fourth grade. Many frequently occurring at-risk factors can not be altered by the school, the most frequent being mother's and father's occupation, family structure, and change of residence in the past year. The most frequently occurring alterable factors were participation in extracurricular activities and self-esteem (estimated by teacher). At-risk items related to the traditional school varied across grade levels; four that placed the student in the extremely high-risk category were number of classes failed, average grade in previous semester, parental attitudes toward education, and change of schools in the past year. The strongest correlations between "at-riskness" and school effort were found in the seventh grade for all students and in the tenth grade for the upper decile. (SV)

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The Phi Delta Kappa "At-Risk-Scale: Its Composition, Meaning and Educational Implications

ED 323731

Introduction

The focus of this study reflects on-going activity with the "students-at-risk" study conducted by Phi Delta Kappa International (here after referred to as PDK). Delegates at the 1987 PDK Biennial Council were surveyed as to which of fourteen issues they felt would be especially critical by 1990. Topping the list as the number one issue was at/risk/neglected/abused students. Number two was changing demographic factors. The respective rankings suggested to those conducting the survey that students who are at-risk are also those who are most affected by the demographic changes in our society. Thus, for schools to be effective there must be a recognizable effort to locate at-risk students. A determination of what environmental and academic characteristics make a student at-risk, and development of support programs by school personnel to retain the at-risk student are critical policy issues for the educational community.

Four basic questions were to be addressed by the study:

1. Who is at risk?
2. What are they like?
3. What is the school doing to help these students?
4. How effective are these efforts?

Although the focus was to be on the student and their academic progress other demographic factors were believed to be equally important. The research therefore would focus on five factors which make a student at-risk; family, peers, school, life events and community.

PDK chapters were invited to apply to be part of the research study. Two hundred and forty chapters applied, one hundred were selected with one of those being the Pittburg State University chapter. Each chapter participating was required to select three different schools, one elementary, middle/junior high and high school representing the geographical area served by the chapter. Approximately one hundred "typical" students were to be selected from the fourth, seventh, and tenth grades of the respective schools. Given that Southeastern Kansas is a rural area of the state, the three schools in this study are rural schools. The student data were obtained from school files, interviews with teachers, counselors and administrators. There was no actual contact with the student for purposes of data collection.

The data were analyzed in terms of the at-risk and school effort score. For the purpose of this study the definition of "at-risk" was that used by the PDK study (1989): "if a student is likely to fail in school or fail in life as reflected by failing grades, retained a grade, used drugs, sexually abused, lived in a home with drugs or alcohol excess, or comtemplated suicide".(p.

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15) The school effort score represents the offering of programs aimed at working with at-risk students and preventing drop-outs. The thirteen items used to calculate the school effort score are: placed in lower track courses, individualized instruction provided, flexible scheduling provided, tutoring or special assistance provided, extra homework provided, extra basic skills instruction provided, parent involvement opportunity provided, special teachers provided, extra materials provided, and psychologist provided.

At-Risk Scores and Scales

Three at-risk scoring schemes will be used to analyze the data. The original PDK scale; a scale developed specifically for drop-out prevention at a small Southeastern Kansas school; and, a scale developed from analyzing the characteristics of the PDK data.

The PDK scale was developed from a review of the literature conducted by the central project staff. Forty-five items were identified as indicators of "at-riskness". To determine the relative importance of each item, ninety-seven experienced educators were asked to rank the items by importance. A rank ordering of the ninety-seven educators' importance ratings resulted in the specific weights assigned to each of the forty-five items. The first nine items in importance were assigned a value of five, the next nine a four, the next nine a three, the next seven a two, and the last two a zero. A summing of the weights resulted in the "at-riskness" score.

The second scale, the Roberts (1989) scale, was developed to measure an at-risk score for drop-outs of a small rural Kansas school. Although, the same forty-five items were used a different weighting pattern emerged. This pattern was developed from a review of school records, talks with the counselor and a review of the literature (Roberts, 1989). Five items were deemed to be extremely important in relation to "at-riskness" in this scale: non-promotion, age relative to grade level, poor academic performance, excessive absence, and little involvement in activities at school. The weight of five was assigned to the first eight items, a four to the next nine items, a three to the next ten items, a two to the next eight items, an one to the next five items and a zero to the last three items of importance.

The third scale was developed by the first author of this study based upon the analysis of the Southeastern Kansas/PDK data base. The same forty-five items were used for the scale; however, two variable definitions were modified. The orginal PDK scale coded as "at-risk" students whose mothers occupations were unemployed, unskilled or housewife. The researchers' scale used only unemployed and unskilled. After a review of the literature (Fine & Fosenburg, 1983), IQ codes for "at-riskness" was expanded to include both the lowest IQ scores and extremely high IQ scores. Additionaly, an analysis of variables which although occurring in low frequencies in the overall data base but were prominent for students in the upper twenty-fifth and tenth percentiles of at-risk students was conducted. That analysis and the relative frequencies of item occurance was used in assigning

the weights. The weights again resulted in nine items with a weight of five, nine with a weight of four, seven with a three, nine with a two, seven with a one, and two with values of zero.

The school effort score is the one developed by PDK (1989) and is based on instructional strategies. The score reflects how many of thirteen strategies are available for the students. A score of thirteen would mean that all the strategies were available, while a score of one would mean that only one strategy was available for the student.

Findings

The following analyses are representative of those which will be contained in the full paper.

A data base of 270 students: 88 4th graders, 101 7th graders and 81 10th graders is utilized in the study. Table one contains the comparison of the three at-risk scales overall and for the most at risk students - that is students in the upper 25th and 10th percentiles

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INSERT TABLE 1

The Roberts and Freund scales appear to be more sensitive to the lower grades than the PDK scale. For we found that although the same number of total students were at-risk for each grade level, there was a larger number of students in the upper percentiles using the Roberts and Freund scales. For the 4th grade the PDK scale resulted in nineteen students ranked in the 25th percentile, while the Freund scale resulted in thiry-four students ranked at the 25th percentile and the Roberts scale had thiry-one.

To determine which at-risk items occurred most often by grade, the top ten item frequencies were calculated for each grade as well as for the top twenty-fifth and tenth percentiles. The top ten items were then coded for alterability under the traditional view of school. Bloom (1981) describes alterable items as those in which a cause/effect relationship maybe used to improve student learning. In term of our study, items such as mothers occupation would be classified as not-alterable and average grade recorded as alterable. The top ten (with tied ranks) items for the the tenth grade were as follows: mothers occupation, fathers occupation, family structure, number of excurricular activities, number of schools attended in the five past years, fathers educational level, parents attitude to education, average grade recorded the past year, number of courses failed the past year, teachers estimate of the students' self-esteem, student changed residence past year, age relative to grade level. Coding this list yields eight non-alterable items. However, the profile changes, when comparing the alterable to not-alterable using the top five characteristics as the ratio goes from one to four for the intact grade to three to two at the

upper tenth percentile. While the mothers occupation and fathers occupation stay in the top three, other more traditional views of "at-riskness" begin to move up in importance as one considers the upper at-risk scores. Making their move up in importance are average grade recorded last year and number of classes failed. Another item which ranks in the top five consistently is participation in extracurricular activites. The top ten items ranked for the seventh grade resulted in six, six and seven alterable items respectively for the intact grade, upper twenty-fifth percentile, and upper tenth percentile. This pattern with regard to the seventh grade alterable/not-alterable items occurred across all three scales. The seventh grade score tended to be effected more by alterable than by non-alterable items. Items ranking high were number of clases failed, self-esteem and suspension while the not-alterable items receiving a top rank were mothers occupation and family structure. Across all grade levels and range of "at-riskness" scores mothers occupation and family structure consistently ranked in the top five. The top ten (with tied ranks) ranked items for the fourth grade resulted in four, four, and five alterable items. This pattern occurred across all three scales. The non-alterable items receiving high ranks were mother and fathers occupation, family structure, and students changing residence in the past year. The alterable items were number of excurricular activities (ranked number one) and teachers estimate of students self esteem.

When considering factors which affect "at-riskness", factors other than those ranking in th top ten must be considered. One group of variables which must be considered are those which when they do occur result in the student ranking in the upper percentiles of at-risk scores. The not-alterable items tend to be related to the family structure and home environment (eg. mobile families, single parent family, and drug used in the family) across all grade levels. The items which relate to the traditional school tend to vary across the grade levels. Four of the items that placed the student in the extremely high risk category also appeared when considering the top ten items, they are: number of classes failed, average grade recorded last semester, parents attitudes toward education, and changed schools during the past year.

The total number of items which accounted for the at-risk score varied across the intact grade levels. For the fourth grade only twenty-three items entered in the calculations of the at-risk score and this was consistent across all three scaling techniques. For the seventh grade the number of items accounting for the at-risk score jumped to thirty for the PDK scale, thirty-one for the Roberts scale, and thirty-two for the Freund scale. For the tenth grade the number of items increased to thirty-three for the PDK scale, and thirty-four for both the Roberts and Freund scale. This suggests that the items used in calculating the at risk score might be more applicable to the upper grades.

Applying the "at-riskness" score with the school effort score reiterates the fact that not-alterable items weight heavier in the "at-riskness" score. Correlation coefficients were computed to explore the relationship between "at-riskness" and school effort scores for each of the grade levels of record.

Additionlly, coefficients were calculated for those students who were in the upper twenty-fifth and tenth percentiles of "at-riskness". This array of coefficients was undertaken for each of the three scaling techniques and are displayed in table two.

INSERT TABLE 2

Utilizing the PDK scaling, the strongest positive relationship for an intact grade level exists at the seventh grade level and the weakest positive relationship exists at the fourth grade level. When considering only those students who are highly at-risk, the strongest positive relationship exist for the tenth grade at the upper tenth percentile of "at-riskness". Importantly, low negative relationships were found for fourth graders in the upper tenth percentile and seventh graders in the upper twenty-fifth percentile.

For the Roberts scaling technique the pattern is similiar to that found in the PDK data. Again, the strongest positive correlation for an intact grade level was at the 7th grade level. For the most at-risk students the tenth grade had the highest correlations, although not as strong as with the PDK scale. Using the Robert scale there was only one negative correlation, at the seventh grade level. The upper twenty-fifth percentile showed a moderately low negative correlation. The correlations for the Freund scale mirrored those found in the previously two scales, with the exception of the negative correlations. The Freund scale had one negative correlation at the twenty-fifth percentile for the fourth grade.

The final analysis conducted on the data compared the percentile rankings of the local data base to that of the results of the PDK national data base.(Frymeir & Gansneder, 1989) As shown in table three all three scaling techniques resulted in larger percentages of students in the local study being identified as "at-risk"

INSERT TABLE 3

Discussion

What does the analysis of our data base mean for rural America? If we used the traditional view of school one scenerio would be "there is not much we can do". For of the forty-five factors used to predict an "at-riskness" score twenty-three are not alterable while thirteen are alterable. Of those students most at-risk in our data base, with the exception of the seventh grade, over half of the predominant characteristics are not alterable under a traditional view of school. Such low correlations between "at-riskness" score and school effort score maybe the result of not touching the cause of at-riskness with present school programs. At least two plausible explanations

exist for the tenth grade - upper tenth percentile moderate positive relationship. First, both the variables in the "at-riskness" scale and the dimensions of the school effort score favor/reflect the characteristics of adolsecence and the American Public High School. Or, secondly by the tenth grade the accrued behavioral norms representive of at-risk students cannot be ignored wholly by educators. Apparently, the coin maybe turned over for the low negative relationships found in the fourth and seventh grade data. That is, the variables in the "at-riskness" scale and the dimensions of the school effort score disfavor/do not reflect the characteristics of childhood/early adolescence and the American Elementary and Middle school. Upon closer examination of the data it would appear that the school effort is present but not the recognition that youngsters of that age are at-risk. This is reflected in the higher scores for school effort being found at the fourth grade level while the largest number of at-risk students were found in the tenth grade.

The items which identify students most "at-risk" appear consistant across all grade levels. However, due to the method of data collection (eg. student records) information pertaining to some items may not have been recorded in the student file. Still other items have not had the time to display themselves at the early grade levels such as suspension or being expelled. The grade level currently most susceptable to use of the currently designed "at-riskness" score is the seventh grade. At this level the traits defining "at-riskness" are best handled by traditional school programming.

Implications

What implications maybe made from our research? For education to be a viable institution for youth we will need to enter the economic and adult education arenas. Education must be thought of as a life long learning process. Programs aimed at drop-out prevention must include academic skills reinforcement, alternative learning environments and parent involvement. As school programs are now geared their best school effort is at the lower levels where recognition of "at-risk" is rather incomplete. Elementary school personnel should reevaluate their excurricular activities and develop more such programs. Early childhood programs offered at the elementary school is another program which could be designed to deal with the at-risk factors. Early childhood programs would deal not only with the academic issues, but the environmental factors which occurred in large numbers as contributors to "at-riskness". Programs such as "Parents as Teachers" is another viable alternative to the "at-riskness" problem as this program is directed at the parent attitude factor. Such programs as those mentioned above will reguire school districts to reexamine their resource utilization and organizational patterns. These programs require a cooperative effort between the school district and social service agencies in the community.

Future trends call for the school system to provide continuing support for up grading of job skills of parents. As the economy becomes more high tech and service oriented adults

must be (re)educated too. By providing such opportunities the schools will be dealing with a majority of the top ten at-risk characteristics of tenth graders as reflected in our data base. As rural communities tend to support light manufacturing the continued upgrading of skills becomes of great importance. For communities with area vocational schools or community colleges the basic structure exists to provide adult education. What is needed is a more productive working relationship between all interested agencies.

If educational institutions are to effectively address the problem of "at-riskness", then they must redesign their organizational structure to include individuals trained to handle the environmental contributors to "at-riskness". Two such positions might be a Human Services Coordinator and Economic Development Specialist. A Human Services Coordinator would work cooperatively with other human services agencies to solve identified social problems at the local and regional level. Since, for many rural communities the school is the focal point of the community, it seem appropriate to house this individual at the school. The individual should have an education major with a minor in social work, or community counseling. The Economic Development Specialist would work with local/regional business/industry in economic development. Such persons exist at the community college level, an could provide assistance to school district wishing to establish such a position. By working with business/industry this individual would assess job skill requirements, forecast work force changes and develop programs to maintain a skilled labor force. The individual would need to work closely with the area Chamber of Commerce and be well versed in grant applications, as well as a good grasp of the legislative process. The individual should hold a business education, vocational education major with minors in sociology or public administration.

In short, the status quo will not be acceptable as at-risk students make for an "at-risk" society.

Table 1

Number Of Students Scoring In The Upper Percentiles By Scale

Scale	Total	Grade 4th	7th	10th
		Upper 25 percentile		
PDK	58	19	18	21
Roberts	75	31	21	23
Freund	83	34	24	25
		Upper 10 percentile		
PDK	30	5	12	13
Roberts	42	13	12	17
Freund	51	19	16	16

Table 2

Correlation Coefficients: At-Risk Score to School Effort Score

Grades	Scales		
	PDK	Roberts	Freund
Intact Fourth Grade	.2651	.1461	.2299
Upper Twenty-fifth %'ile	.2582	.3443	-.2516
Upper Tenth %'ile	-.1113	.2389	.1273
Intact Seventh Grade	.4058	.3940	.4017
Upper Twenty-fifth %'ile	-.0259	-.3225	.2410
Upper Tenth %'ile	.2633	.2550	.3404
Intact Tenth Grade	.3405	.3198	.3562
Upper Twenty-fifth %'ile	.3216	.3232	.2612
Upper Tenth %'ile	.4608	.3930	.3785

Table 3

Number of Students Scoring In The Upper Percentiles of "At-Riskness"

%'ile	Scale: PDK	Roberts	Freund
Fourth Grade			
Upper 25%	19/88 = 26%	31/88 = 35%	34/88 = 36%
10	5/88 = 6	13/88 = 15	19/88 = 22
5	0/88 =	4/88 = 5	6/88 = 7
2	0/88 =	1/88 = 1	2/88 = 2
1	0/88 =	0/88 =	0/88 =
	32%	56%	68%
Seventh Grade			
Upper 25%	18/101 = 18%	21/101 = 21%	24/101 = 24%
10	12/101 = 12	12/101 = 12	16/101 = 16
5	5/101 = 5	7/101 = 7	9/101 = 9
2	2/101 = 2	3/101 = 3	3/101 = 3
1	2/101 = 2	2/101 = 2	2/101 = 2
	39%	45%	54%
Tenth Grade			
Upper 25%	21/81 = 26%	23/81 = 28	25/81 = 31
10	13/81 = 16	17/81 = 21	16/81 = 20
5	9/81 = 11	12/81 = 15	15/81 = 19
2	6/81 = 7	8/81 = 10	9/81 = 11
1	2/81 = 3	5/81 = 6	5/81 = 6
	63%	80%	87%

References

Bloom, B. (1981). All Our Children Learning. New York: McGraw-Hill

Fine, M., & Rosenburg, P. (1983). Dropping our of high school: The ideology of school and work. Journal of Education, 165, 257-272.

Frymeir, J. (1989). A study of students at risk: Collaborating to do research. Bloomington: Phi Delta Educational Foundation.

Fraymeir, J. & Gansneder B. (1989). The Phi Delta Kappa Study of students at risk. Phi Delta Kappan, 71(2),142-146.

Roberts, A. (1989). Will the PDK criteria checklist work for small schools: Or is there a better way. Unpublished manuscript.